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SEQUENCE LISTING

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Leinung, Matthew

<120> Leptin Related Peptides

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<140> US 10/698,510

<141> 2003-10-31

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<160> 42

<170> PatentIn version 3.2

<210> 1

<211> 167

<212> PRT

<213> Mus musculus

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Met Cys Trp Arg Pro Leu Cys Arg Phe Leu Trp Leu Trp Ser Tyr Leu  
1 5 10 15

Ser Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys  
20 25 30

Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr  
35 40 45

Gln Ser Val Ser Ala Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro  
50 55 60

Gly Leu His Pro Ile Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala  
65 70 75 80

Val Tyr Gln Gln Val Leu Thr Ser Leu Pro Ser Gln Asn Val Leu Gln  
85 90 95

Ile Ala Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala  
100 105 110

Phe Ser Lys Ser Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro  
115 120 125

Glu Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val

130

135

Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln  
145 150 155 160

Leu Asp Val Ser Pro Glu Cys  
165

<210> 2  
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<400> 2

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 3  
<211> 15  
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<400> 3

Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile  
1 5 10 15

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<212> PRT  
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<400> 4

Thr Lys Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile  
1 5 10 15

<210> 5  
<211> 15  
<212> PRT  
<213> Mus musculus

<400> 5

Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser Ala Lys Gln  
1 5 10 15

<210> 6  
<211> 15  
<212> PRT  
<213> Mus musculus

<400> 6

Val Ser Ala Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro Gly  
Page 2

1 5 15

<210> 7  
<211> 15  
<212> PRT  
<213> Mus musculus

<400> 7

Asp Phe Ile Pro Gly Leu His Pro Ile Leu Ser Leu Ser Lys Met  
1 5 10 15

<210> 8  
<211> 15  
<212> PRT  
<213> Mus musculus

<400> 8

Ser Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln Val  
1 5 10 15

<210> 9  
<211> 15  
<212> PRT  
<213> Mus musculus

<400> 9

Val Tyr Gln Gln Val Leu Thr Ser Leu Pro Ser Gln Asn Val Leu  
1 5 10 15

<210> 10  
<211> 15  
<212> PRT  
<213> Mus musculus

<400> 10

Ser Gln Asn Val Leu Gln Ile Ala Asn Asp Leu Glu Asn Leu Arg  
1 5 10 15

<210> 11  
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<212> PRT  
<213> Mus musculus

<400> 11

Asp Leu Leu His Leu Leu Ala Phe Ser Lys Ser Cys Ser Leu Pro  
1 5 10 15

<210> 12  
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&lt;400&gt; 12

Ser Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro Glu Ser  
 1 5 10 15

&lt;210&gt; 13

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&lt;213&gt; Mus musculus

&lt;400&gt; 13

Gln Lys Pro Glu Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr  
 1 5 10 15

&lt;210&gt; 14

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 14

Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser Arg Leu  
 1 5 10 15

&lt;210&gt; 15

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 15

Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln  
 1 5 10 15

&lt;210&gt; 16

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 16

Asp Ile Leu Gln Gln Leu Asp Val Ser Pro Glu Cys  
 1 5 10

&lt;210&gt; 17

&lt;211&gt; 167

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 17

Met His Trp Gly Thr Leu Cys Gly Phe Leu Trp Leu Trp Pro Tyr Leu  
 1 5 10 15

Phe Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys  
 20 25 30

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Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr  
35 40 45

Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro  
50 55 60

Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala  
65 70 75 80

Val Tyr Gln Gln Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln  
85 90 95

Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala  
100 105 110

Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu  
115 120 125

Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val  
130 135 140

Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln  
145 150 155 160

Leu Asp Leu Ser Pro Gly Cys  
165

<210> 18  
<211> 7  
<212> PRT  
<213> Homo sapiens

<400> 18

Ser Cys His Leu Pro Trp Ala  
1 5

<210> 19  
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<212> PRT  
<213> Homo sapiens

<400> 19

Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Ile Leu Thr Leu  
1 5 10 15

Ser Lys

<210> 20  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
ID NO:2

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> wherein Serine is in the D-isoform

<400> 20

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 21  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
ID NO:2

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> wherein Cysteine is in the D-isoform

<400> 21

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 22  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
ID NO:2

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> wherein Serine is in the D-isoform

<400> 22

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 23  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
ID NO:2

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> wherein Leucine is in the D-isoform

<400> 23

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 24  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
ID NO:2

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> wherein Proline is in the D-isoform

<400> 24

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 25  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
ID NO:2

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> wherein Glutamine is in the D-isoform

<400> 25

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 26  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
 ID NO:2

<220>  
 <221> MOD\_RES  
 <222> (7)..(7)  
 <223> wherein Threonine is in the D-isoform

<400> 26

Ser Cys Ser Leu Pro Gln Thr  
 1 5

<210> 27  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to mouse leptin SEQ  
 ID NO:2

<220>  
 <221> MOD\_RES  
 <222> (1)..(7)  
 <223> wherein all amino acids are in the D-isoform

<400> 27

Ser Cys Ser Leu Pro Gln Thr  
 1 5

<210> 28  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (1)..(1)  
 <223> wherein Serine is in the D-isoform

<400> 28

Ser Cys His Leu Pro Trp Ala  
 1 5



<210> 29  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (2)..(2)  
 <223> wherein Cysteine is in the D-isoform

<400> 29

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 30  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (3)..(3)  
 <223> wherein Histidine is in the D-isoform

<400> 30

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 31  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (4)..(4)  
 <223> wherein Leucine is in the D-isoform

<400> 31

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 32  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (5)..(5)  
 <223> wherein Proline is in the D-isoform

<400> 32

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 33  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (6)..(6)  
 <223> wherein Tryptophan is in the D-isoform

<400> 33

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 34  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ  
 ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (7)..(7)  
 <223> wherein Alanine is in the D-isoform

<400> 34

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 35  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ ID NO:18

<220>  
 <221> MOD\_RES  
 <222> (1)..(7)  
 <223> wherein all amino acids are in the D isoform

<400> 35

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 36  
 <211> 7  
 <212> PRT  
 <213> Artificial

<220>  
 <223> D-amino acid substituted analog corresponding to human leptin SEQ ID NO:18 or mouse leptin SEQ ID NO:2

<220>  
 <221> MOD\_RES  
 <222> (4)..(5)  
 <223> wherein Leucine and Proline are in the D-isoform

<400> 36

Ser Cys His Leu Pro Trp Ala  
 1 5

<210> 37  
 <211> 9  
 <212> PRT  
 <213> Artificial

<220>  
 <223> An embodiment of a leptin peptide

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(1)  
 <223> wherein xaa may be zero residues in length, or may be a contiguous stretch of residues derived from SEQ ID NOS: 1 or 17 herein, and preferably a stretch of between 1 to 7 residues from either the C-terminus or N-terminus

<220>  
 <221> MISC\_FEATURE  
 <222> (4)..(4)

<223> wherein Xaa is Histidine or Serine

<220>  
 <221> MISC\_FEATURE  
 <222> (4)..(4)  
 <223> wherein Xaa can be any conservative amino acid substitution from  
 SEQ ID NOS: 1 or 17 herein

<220>  
 <221> MISC\_FEATURE  
 <222> (4)..(4)  
 <223> wherein Xaa can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (6)..(6)  
 <223> wherein Xaa can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (7)..(8)  
 <223> wherein Xaa can be any conservative amino acid substitution from  
 SEQ ID NOS: 1 or 17 herein

<220>  
 <221> MISC\_FEATURE  
 <222> (7)..(7)  
 <223> wherein Xaa can be Tryptophan or Glutamine

<220>  
 <221> MISC\_FEATURE  
 <222> (7)..(8)  
 <223> wherein Xaa can be any amino acid

<220>  
 <221> MISC\_FEATURE  
 <222> (8)..(8)  
 <223> wherein Xaa can be Alanine or Threonine

<220>  
 <221> MISC\_FEATURE  
 <222> (9)..(9)  
 <223> wherein Xaa may be zero residues in length, or may be a  
 contiguous stretch of residues derived from SEQ ID NOS: 1 or 17  
 herein, and preferably a stretch of between 1 to 7 residues from  
 either the C-terminus or N-terminus

<400> 37

Xaa Ser Cys Xaa Leu Pro Xaa Xaa Xaa  
 1 5

<210> 38  
 <211> 5  
 <212> PRT  
 <213> Artificial

<220>  
 <223> Truncated analog of mouse leptin SEQ ID NO:12

<400> 38

Ser Cys Ser Leu Pro  
1 5

<210> 39  
<211> 6  
<212> PRT  
<213> Artificial

<220>  
<223> Truncated analog of mouse leptin SEQ ID NO:12

<400> 39

Ser Cys Ser Leu Pro Gln  
1 5

<210> 40  
<211> 7  
<212> PRT  
<213> Artificial

<220>  
<223> Truncated analog of mouse leptin SEQ ID NO:12

<400> 40

Ser Cys Ser Leu Pro Gln Thr  
1 5

<210> 41  
<211> 8  
<212> PRT  
<213> Artificial

<220>  
<223> Truncated analog of mouse leptin SEQ ID NO:12

<400> 41

Ser Cys Ser Leu Pro Gln Thr Ser  
1 5

<210> 42  
<211> 9  
<212> PRT  
<213> Artificial

<220>  
<223> Truncated analog of mouse leptin SEQ ID NO:12

<400> 42

Ser Cys Ser Leu Pro Gln Thr Ser Gly  
1 5